REMARKS/ARGUMENTS

The present Amendment is in response to the Office Action having a mailing date of September 1, 2005. Claims 1-23 are pending in the present Application. Applicant has amended claims 1, 10-15, and 17-22. Consequently, claims 1-23 remain pending in the present Application.

Applicant has amended claim 1 to recite that the test case(s) coupled with the generator provide data and a request that the generator perform a particular simulation on the island and that the test case excludes logic for directly controlling the functions of the snooper, the generator and the checker. Applicant has amended claims 10 and 17 in an analogous manner. Support for the amendment can be found in the specification, page 13, lines 17-20. Applicant has also amended claims 11-15 and 18-22 to remove alphanumeric designations for the steps and instructions. Accordingly, Applicant respectfully submits that no new matter is added.

In the above-identified Office Action, the Examiner rejected claims 1-23 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,182,258 (Hollander) in view of U.S. Patent No. 6,006,014 (Guruswamy).

Applicant respectfully traverses the Examiner's rejection. Claim 1 recites a system for performing simulation of an integrated circuit (IC) during development of the IC. The IC has an island including an interface. The system recited in claim 1 includes a snooper, a checker, a generator, and at least one test case. The snooper is coupled with the interface, monitors the interface, and obtains an output provided by the island during simulation. The checker is also coupled with the interface, calculates the desired output based upon the input, and checks the output to determine whether the output is a desired output. The generator is coupled with the island and provides an input to the island during simulation. The generator further includes intelligence to provide the input to the island based only upon the data and the request. The test case(s) are

coupled with the generator. The test case(s) provide data and a request that the generator perform a particular simulation on the island without the test case(s) including logic for directly controlling the functions of the snooper, the generator and the checker. Claims 10 and 17 recite analogous method and computer-readable medium claims.

Thus, the system, method, and computer-readable medium recited in independent claims 1, 10, and 17, respectively, hierarchical simulation of the behavior of the IC is performed. Moreover, the snooper, checker and generator can perform the functions recited without the test case(s) requiring intelligence for controlling specific functions of the snooper, checker and generator. Specification, page 13, lines 7-20. Stated differently, the snooper, checker, and generator contain the intelligence to perform their functions, rather than requiring that such intelligence resides in the test case(s). Specification, page 13, lines 18-20. Only the data and request for service may be provided by the test case. Consequently, the test case(s), many of which may be required for testing of the IC, are simpler to provide and may be fewer in number. Specification, page 13, lines 4-5. As a result, testing is simplified and improved.

As argued previously, Hollander in view of Guruswamy fails to teach or suggest the use of a checker that both generates the desired inputs and checks the actual inputs against the desired inputs. Applicant respectfully reiterates arguments made previously, particularly noting that none of the cited portions of Hollander describe the checker module actually calculating the desired outputs based upon the inputs. As argued previously, Guruswamy fails to remedy this defect of Hollander.

Further, Hollander in view of Guruswamy fails to teach or suggest the use of the combination of the checker, generator, and snooper in conjunction with the recited, simplified test case that provides data and a request for a simulation but does not include logic for directly

controlling the functions snooper, checker or generator. Stated differently, Hollander in view of Guruswamy fail to teach or suggest the use of a snooper, checker, and generator that include sufficient intelligence to perform the recited monitoring, checking, and input generating functions in conjunction with simplified test cases.

Hollander describes a system that is analogous to that described in the BACKGROUND of the present application. See, Specification, page 1, line 7-page 7, line 13. In particular, Hollander requires the use of test architecture files analogous to the complex test cases described in the BACKGROUND. In particular, Hollander describes constructing and customizing verification tests. Hollander, col. 4, lines 58-60. The language used to create these test are "shaped to provide those elements needed to stimulate and observe a model of a hardware device." Hollander, col. 4, lines 60-62. Hollander states that the test generator module automatically crates a "device verification test from a functional description [e.g. the tests created]. The test generator can be constrained to generate tests for specific subsets of the design's functionality. Thus, some test can focus on a specific feature in the design, while other test can address broader functional scopes." Hollander, col. 4, line 66-col. 5, line 5. Thus, the tests created control the functions of the test generator of Hollander.

More specifically, the test architecture files of Hollander constrain the test generator and, therefore, correspond to the conventional test cases including significant intelligence, control over the functions of checking, monitoring, and input generation. Hollander, Fig. 1 items 12, 14, 16, 18, and 20. With respect to the test architecture files, Hollander states:

> [t]he invention integrates an architectural description of the DUT [device under test] with abstract test generation and analysis. In the preferred embodiment of the invention, test architecture files 12 are created using the hardware-oriented verification specific object-oriented programming language. An input-output (I/O) data model 14, is defined, as are files for checking rules 16 and relevant coverage

> parameters 18. Test description files 20 are also created. The invention's runtime environment 22 then applies specific patterns to the DUT. Reports and coverage information are collected during runtime, according to the specifications in the input.

Hollander, col. 7, lines 1-11. Thus, Hollander describes a modular system in which the test generator (item 26 of Fig. 1) is controlled by the test architecture files that include rules, data models, and other specifics of how the test is to be run. Hollander, therefore, still requires the use of items corresponding to conventional test cases—which include the intelligence for regulating the specific snooping, checking, and input generating tasks. Thus, Hollander fails to teach or suggest a system, method, or computer-readable medium which use the combination of the recited checker, generator, and snooper in conjunction with the recited, simplified test case that provides data and a request for a simulation but does not include logic for directly controlling the functions snooper, checker or generator.

Guruswamy fails to remedy the defects of Hollander. Applicant has found no mention in Guruswamy of the combination of the recited checker, generator, and snooper in conjunction with the recited, simplified test case that provides data and a request for a simulation but does not include logic for directly controlling the functions snooper, checker or generator. Moreover, Guruswamy fails to mention providing sufficient intelligence in the generator to allow test case(s) to be simplified. Consequently, any combination of Hollander and Guruswamy would also omit these features. Hollander in view of Guruswamy thus fails to teach or suggest a system, method, or computer-readable medium that includes the recited checker, the recited generator, the recited snooper, and the recited test cases. Accordingly, Applicant respectfully submits that independent claims 1, 10 and 17 are allowable over the cited references.

Claims 2-9, 11-16 and 18-23 depend upon claims 1, 10 and 17, respectively. Consequently, the arguments herein apply with full force to claims 2-9, 11-16 and 18-23. Accordingly, Applicant respectfully submits that claims 2-9, 11-16 and 18-23 are allowable over the cited references.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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